

REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-11 are pending in the present application with Claims 1, 9, and 10 are amended by the present amendment.

In the outstanding Office Action, Claim 9 was objected to; Claims 1-8, 10 and 11 were rejected under 35 U.S.C. § 112, first paragraph; Claims 1-8, 10 and 11 were rejected under 35 U.S.C. § 103(a) as unpatentable over Kanazawa et al. in view of Ryan et al.; Claims 1-8, 10 and 11 were rejected under 35 U.S.C. § 103(a) as unpatentable over Kanazawa et al. in view of Nakayama et al.; and Claim 9 was rejected under 35 U.S.C. § 103(a) over Applicants' admitted art in view of Gay et al.

Regarding the objection to Claim 9, the outstanding Office Action indicates the phrase "intersecting with" should be changed to "parallel to." The present response amends Claim 9 to clarify the recited configuration and to conform to 37 C.F.R. § 1.75(a). Support for the amendment can be found in a non-limiting exemplary embodiment at FIG. 4, showing ribs 10 extending along a direction (D1) orthogonal to the display line and separating discharge cells from non-discharge cells in a direction (D2) parallel to the display line. Accordingly, it is respectfully requested this objection be withdrawn.

Claims 1-8, 10 and 11 stand rejected under 35 U.S.C. § 112, first paragraph. This rejection is respectfully traversed.

The outstanding Office Action indicates that if a scan electrode includes t strip portions, a sustain electrode must include two t strip portions.¹ However, as explained at

¹ See Office Action, page 3, lines 13-14.

page 20, line 23 to page 21, line 6 in the specification, because pairs X_{i1} and Y_{Li1} , and X_{i2} and Y_{Ri2} are formed, there is no necessity for a sustain electrode to include two t strip portions if a scan electrode includes t strip portions as indicated by the outstanding Office Action. Further, page 20, line 20 recites that " i_2 does not equal i_1 ," which is indicative of the sustain electrode not having to include two t strip portions. This case is discussed in the specification at page 20, line 23 to page 21, line 6. Moreover, enclosed with this response is Appendix A, containing FIGs. X and Y to further clarify the distinction. FIG. X shows the case described above (" i_2 does not equal i_1 "). Support for FIG. X can be found in the specification at page 20, line 23 to page 21, line 6. FIG. Y illustrates an alternative case (" i_2 equals i_1 "). FIG. Y, in turn, is fully supported by FIG. X and the same discussion in the specification. More specifically, FIG. Y illustrates an exemplary configuration where the number of strip portions of a sustain electrode is twice the number of strip portions of a scan electrode. However, this case does not satisfy the requirement "a scan electrode including t strip portions belonging to said t discharge cells" recited in Claim 9.

Accordingly, it is respectfully requested this rejection be withdrawn.

Claims 1, 2, 5-8, 10 and 11 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kanazawa et al. in view of Ryan et al. This rejection is respectfully traversed.

Presently amended Claims 1 and 10 recite a method of driving an AC plasma display panel including the steps of applying a prescribed voltage to each strip portion of an address electrode in common, applying a prescribed voltage to each strip portion of the scan electrode *to cause writing discharge based on image data*, and applying a first voltage to one of the t strip portions of a sustain electrode belonging to a single discharge cell among said t discharge cells *to cause writing sustain discharge with a trigger of said writing discharge*

while applying a second voltage to remaining all of the strip portions of the sustain electrode, *wherein the second voltage cannot cause the writing sustain discharge.*²

In a non-limiting example, Figure 2 illustrates a timing chart of driving voltages showing “writing sustain discharge” generated between Xi and YLi, with a trigger of a “writing discharge” related to the voltage potential between Xi and Wj (see also page 23, line 7, through page 24, line 14).

The outstanding Office Action acknowledges that one difference between the claimed invention and Kanazawa et al. is that the strip portions of the address electrodes are connected to an output terminal of the driving unit in common.³ With regard to Ryan et al., applied in outstanding Office Action for its teaching of strip portions of an “address” electrode being connected to an output terminal of a driving unit,⁴ Applicants submit that the shift electrode disclosed in Ryan et al. does not function as an address electrode. Moreover, Ryan et al. is not relied upon to disclose a step that would apply a second voltage to all remaining strip portions of a sustain electrode, with the second voltage not causing a writing sustain discharge.

Accordingly, it is respectfully submitted independent Claims 1 and 10 and each of the claims depending therefrom are allowable over Kanazawa et al. in view of Ryan et al.

Claims 1-8, 10 and 11 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kanazawa et al. in view of Nakayama et al. This rejection is respectfully traversed.

Applicants respectfully submit that Nakayama et al. does not disclose that the third electrodes C1 and C2 *apply a first voltage to one of said t strip portions of said sustain*

² Support for the amendments can be found throughout the specification at least at page 8, lines 5 through 19, and at page 22, line 17 through page 23, line 6.

³ Office Action, page 5, lines 6-8.

⁴ Office Action, page 5, lines 9-12.

electrode belonging to a single discharge cell among said t discharge cells, as recited in Claim 1 of the present application.

As disclosed in Col. 2, line 64, of Nakayama et al., a logical multiplying operation is performed. When potentials of the same polarity are applied to each of electrodes X1, X2, and X3 (see Figure 2 and subsequent figures, at features A, B, and C, respectively) a predetermined potential difference is produced between the electrodes and a Y electrode to cause a discharge.

Due to the operation as aforementioned, Applicants point out that Nakayama et al. does not perform an application of potential for a discharge in the selected cell. In other words, Applicants respectfully submit that Nakayama et al. lacks the technical viewpoint for using the electrodes X1, X2, and X3 as a scan or a sustain electrode. Accordingly, even if the scan or sustain electrode were disclosed in Kanazawa et al., as indicated at page 4, paragraph 7 of the outstanding Office Action, Applicants note that neither Kanazawa et al. nor Nakayama et al. provide sufficient motivation to combine references because it is not clear which of the electrodes X1, X2, or X3 in Nakayama et al. would be the scan electrode or the sustain electrode. In other words, Applicants submit there is no motivation within the references to apply an embodiment wherein a voltage application is made in a manner that a first voltage is applied to one of strip portions of the sustain electrode corresponding to a single discharge cell while a second voltage is applied to remaining all the strip portions of the sustain electrode to the electrodes X1, X2, and X3 in Nakayama et al.

In addition, though the present application applies a prescribed voltage to each strip portion of the scan electrode *to cause writing discharge based on image data* and applies a first voltage *to cause writing sustain discharge with a trigger of said writing discharge* while

applying a second voltage *to avoid causing the writing sustain discharge*, Applicants submit that such manner of voltage application is incompatible with the manner of discharge as disclosed in Nakayama et al. In view of the technique disclosed in Nakayama et al., Applicants note that voltages applied to the electrodes X1, X2, and X3 become almost equal to each other as shown in Figure 1C to increase the potential difference between the electrodes and the Y electrode, thereby causing a discharge. Accordingly, even if Kanazawa et al. disclose applying first and second voltages as recited in claims 1 and 10 of the present application, it would not have been obvious to one of ordinary skill in the art to adopt the electrode configuration of Nakayama et al. in Kanazawa et al.

Accordingly, it is respectfully requested this rejection also be withdrawn.

Claim 9 stands rejected under 35 U.S.C. § 103(a) as unpatentable over the admitted art in view of Gay et al. This rejection is respectfully traversed.

As amended, Claim 9 recites that the plurality of barrier ribs extend along a direction orthogonal to the display line and separate said discharge cells from non-discharge cells in a direction parallel to the display line. The outstanding Office Action relies on Gay et al. as teaching discharge cells arranged adjacently to each other through at least one non-discharge cell in a horizontal direction *parallel to a display line*. However, Applicants submit that Gay et al. does not teach or suggest a plurality of *barrier ribs* separating the non-discharge cells from the discharge cells. Therefore, it would not have been possible to obtain the configuration recited by Claim 9 of the present application even if the barrier ribs described by the admitted art are applied to Gay et al.

Accordingly, it is respectfully requested this rejection also be withdrawn.

Claim 9 stands rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over Claim 2 of Hashimoto et al. (U.S. Patent No. 6,603,263 BA). This rejection is respectfully traversed.

Claim 2 of U.S. Patent No. 6,603,263 BA and Claim 9 of the present application recite patentably distinct subject matter. Applicants respectfully submit that the barrier ribs described in Claim 2 of U.S. Patent No. 6,603,263 BA, including the limitations of base Claim 1, are not defined to perform the function of separating the discharge cells and the non-discharge cells as recited in Claim 9 of the present application. Furthermore, Applicants submit that the strip portions of the address electrode recited in Claim 9 are not shown in the limitation of the third electrodes in Claim 2 of U.S. Patent No. 6,603,263 BA.

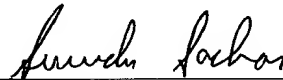
Accordingly, it is respectfully requested this rejection also be withdrawn.

Application No. 09/684,616
Reply to Office Action of October 21, 2003

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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ENCL.: APPENDIX A – FIGs X and Y.

APPENDIX A

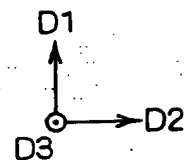
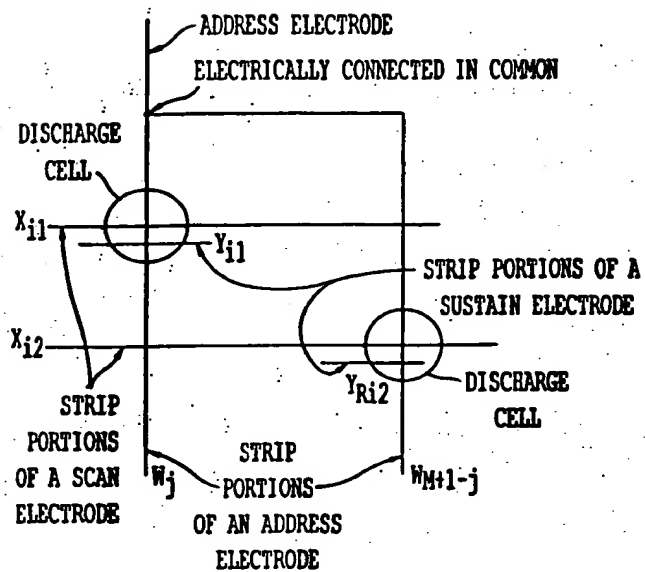


FIG. X

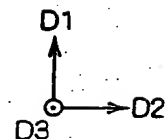
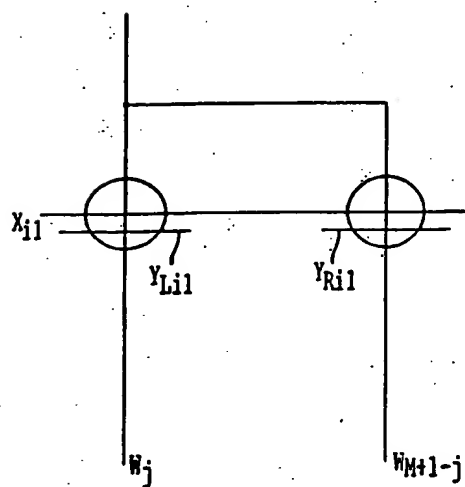


FIG. Y